



Memorandum

TO: TRANSPORTATION AND
ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow
Barry Ng

SUBJECT: SEE BELOW

DATE: February 20, 2015

Approved

Date

2/23/15

SUBJECT: PROJECT DELIVERY AND PROCUREMENT STRATEGY FOR THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

1. Accept this staff report on the proposed project delivery and procurement strategy for the San José-Santa Clara Regional Wastewater Facility's Capital Improvement Program and refer to the full Council for approval.
2. Recommend that Council adopt a resolution that approves the use of low bid design-build and progressive design-build as potential delivery methods for projects in the San José-Santa Clara Regional Wastewater Facility's Capital Improvement Program and that delegates authority to the Directors of Environmental Services and Public Works, or their designees, to make a determination on the appropriate delivery method for each project.

OUTCOME

Acceptance of the recommendations will streamline the project delivery and procurement processes. The ability to use either design-bid-build or design-build will allow staff the flexibility to select the most effective delivery method for each project.

BACKGROUND

The Plant Master Plan adopted by Council in November 2013 recommended over 100 capital projects with an estimated total of \$2.1 billion to rebuild and modernize the San José-Santa Clara Regional Wastewater Facility¹ (RWF) over the next 30 years. In early 2014, validation of these projects resulted in 33 project packages and eight programmatic studies planned for the next ten years. Twenty-one of the 33 project packages were planned for initiation in the first five years.

¹ The legal, official name of the facility remains San Jose/Santa Clara Water Pollution Control Plant, but beginning in early 2013, the facility was approved to use a new common name, the San José-Santa Clara Regional Wastewater Facility.

The ten-year Capital Improvement Program (CIP) is estimated at about \$1.5 billion.

Staff's strategy for delivering the CIP projects includes a combination of City staff, Program consultant management staff, and third-party design consultants and construction managers to ensure the needed resources and expertise are provided for each project. In order to deliver the projects initiated in this fiscal year (FY), staff plans to procure consultant services through eight separate Requests for Qualifications (RFQs) before the end of FY 2014-2015. The types of consultant services will include project-specific design and construction management services as well as program-level general engineering, peer review and value engineering, and auditing services. A list of the eight RFQs planned to be advertised before the end of this fiscal year is included as Attachment A.

Project Delivery Options

The wastewater industry employs various project delivery methods, including traditional low bid design-bid-build, low bid design-build and progressive design-build. The delivery method undertaken for a particular project is dependent upon a number of factors such as legality of the delivery method in the state or local jurisdiction, the project's goals, the project's schedule, cost and risk mitigation considerations. Over the years, delivery methods other than traditional low bid design-bid-build have become increasingly popular for a variety of reasons such as the preference of owners to select contractors based on qualifications, the desire to involve the contractor during the design phase of the project, and the desire to allocate risk to the contractor and reduce the potential for litigation. Alternate delivery methods can also provide opportunities to accelerate project schedules and to increase innovation and collaboration. For example, progressive design-build provides a project's owner the flexibility to define the project based on available funds, select a contractor based on qualifications and other factors rather than just the lowest bid, and negotiate a contract that is structured around the project's priorities.

As provided for in Section 1217 of the City's Charter and Chapter 14.07 of the San José Municipal Code, the City may award a design-build contract where the contract will cost more than \$5,000,000 and Council makes findings that the design-build procurement process will save money or result in faster project completion. Under this authority, Council also approves the request for proposals, and the criteria and process by which the City shall select a design-build entity.

Since the RWF serves a number of jurisdictions, it is considered a regional facility and is subject to the State's public contracting and construction statutes, including those relating to design-build procurement and construction requirements. In regards to design-build, on January 1, 2015, Senate Bill 785 (Wolk) took effect and consolidated the various design-build authorities for special districts, local and state agencies, and authorized the use of design-build. The State now permits design-builders to be procured by agencies covered by SB 785, with approval from their governing bodies, using either a low bid or "best value" selection method, for projects over \$1,000,000. Price, technical design and construction expertise, lifecycle costs over 15 years, labor force availability, and safety record must be considered when determining which design-builder will provide the best value.

To date, the majority of projects at the RWF have been delivered using the low bid design-bid-build method. A few projects, such as the Digester Gas Compressor Upgrade and the Emergency Diesel Generators, have utilized the low bid design-build method. No projects have yet been implemented at the RWF using the progressive design-build method. The Cogeneration Facility project currently underway is the first project to use progressive design-build at the RWF. Council approved the use of design-build for the Cogeneration Facility on October 7, 2014.

ANALYSIS

Staff is considering using the design-build method to deliver projects with a high degree of risk due to unknown conditions and/or interdependencies. Since each process area is connected to many other process areas, the interfaces among the various projects are particularly complex. Furthermore, since the RWF needs to operate 24 hours a day, seven days a week, much of the infrastructure cannot be easily shut down for detailed condition assessments in advance of the projects. The traditional low bid design-bid-build method does not lend itself well to projects with many unknowns as well as complex interfaces with other infrastructure. For example, under design-bid-build, a project's owner would be liable to the contractor for extra costs should there be unforeseen conditions causing the drawings in the contractor's documents to be different than the field conditions. If the same project were delivered using a design-build method, the contractor could provide their input during the project's design thereby encouraging innovative solutions and improving constructability. Design-bid-build also places the City in the position of bearing the risk of determining accountability should issues arise during construction or there be operational challenges after. Under design-bid-build, a contractor is responsible for building a project in accordance with drawings in its contract documents which may contain design deficiencies; however, under design-build, the design-builder is responsible for providing a functioning system that meets minimum performance specifications.

The decision about which project delivery method to use will be based on several factors including project size, project complexity, performance risk, level of control desired, and project schedule. Attachment B includes a template memo which staff will use as a general guideline to evaluate the appropriate delivery method for every project. During the project scoping phase and prior to issuing a Request for Qualifications (RFQ), project managers will meet with the project team to evaluate the aforementioned criteria to make a delivery method recommendation to Program leadership. If design-build is recommended as the delivery method for a project, approval will be required by the Directors of Environmental Services and Public Works or their designees. For example, projects posing significant operational risks because they have several interfaces with other projects, and have high costs (\$10 million or more), may be better suited for a design-build delivery method. Some of the near-term CIP projects that may be well suited for the design-build delivery method include the Headworks Improvements, New Headworks, and Digested Sludge Dewatering Facility projects. These are in addition to the Cogeneration Facility project, which is already proceeding with a design-build delivery approach. Council and the Treatment Plant Advisory Committee (TPAC) will be kept apprised about the decision-making process through informational memos for all projects proceeding with a design-build delivery method.

Project Specific Consultant Agreements

As stated earlier, several projects will require procurement of consultant services. Of the eight consultant procurements anticipated to be advertised this fiscal year, five will use project-specific agreements. Most project-specific agreements will be structured as master consultant agreements (MCAs) requiring subsequent service orders (SOs) to be issued further specifying the tasks and authorizing the consultant to proceed with work. The project-specific MCAs will include tasks requiring the consultant to follow the CIP's Project Delivery Model by providing services during the project alternatives and conceptual design stages. Additionally, project-specific MCAs will require either final design and engineering services during construction (if design-bid-build) or owner's agent and construction management services (if design-build). It is important to note that the design consultant will not, on any project, be allowed to partially design a project and to then propose to be part of the same project's design-build team.

MCAs will be approved with a maximum compensation amount; however, actual funds will not be encumbered until SOs with detailed scope are executed. For design-build, some of the design costs will shift from the MCA to the design-build contract, thus reducing the overall fees for the consultant. In this case, the consultant will complete up to 30 percent design documents and the remaining design will be completed by the design-build contractor.

A standard consultant agreement (SCA) will only be used in cases where a project has been substantively scoped and a delivery method (design-bid-build or design-build) has been determined prior to the procurement. Given the size and scope of most projects, the terms for both MCAs and SCAs will likely exceed five years as the intent is to maintain continuity of consultant services for the entire duration of a project, irrespective of the delivery method (design-bid-build or design-build).

Program-Level Consultant Agreements

The eight RFQs anticipated to be advertised this fiscal year include three for program-wide MCAs. Staff anticipates awarding MCAs for general engineering services, peer review and value engineering services, and audit services. The scope of the general engineering services MCAs includes engineering studies and engineering services for small, urgent or unscheduled projects. Peer review and value engineering services MCAs will allow the Program to conduct independent reviews of the large design projects. The audit services MCA will include services to provide ongoing construction audit and other audit services, including audits of consultant and contractor progress payments.

Streamlining the Procurement Process

In order to efficiently procure multiple consultant services in a short time span, staff is developing document standards and processes that will streamline the overall procurement process. This includes establishing selection criteria for RFQs as well as using a consistent approach for forming the technical evaluation and interview panels. Furthermore, staff is developing templates for project managers to use when drafting scopes of services for RFQs, MCAs, SCAs and SOs. These templates are based on City-approved formats.

To further expedite the procurement process, staff intends to shorten the time spent negotiating

fees with consultants by requiring that they submit a cost form along with their Statement of Qualifications. The cost form will include information on the consulting firm's labor and overhead costs, and their profit margin. This information will be scored and be the basis of the negotiated fees. This approach also allows the City to better understand the consultant's profit margins and negotiate a rate multiplier that is fair to both entities.

EVALUATION AND FOLLOW-UP

No specific follow-up action is anticipated on the procurement strategy. Staff will bring forward individual consultant agreement and construction contract awards to TPAC and Council for approval. Staff will also submit an information memo to TPAC and Council each time a decision to deliver a project using the low bid or progressive design-build method is made describing the basis for such decision.

POLICY ALTERNATIVES

Alternative 1: Use design-bid-build as the default project delivery method and bring forward specific projects contemplated for design-build delivery for approval on a case-by-case basis

Pros: Most prior projects at the RWF have been completed using traditional low bid design-bid-build; thus, staff is familiar with the documents and process for this type of delivery method.

Cons: The proposed projects are significantly more complex and of a higher dollar value than almost all the RWF projects completed in the last two decades. Since all areas of the RWF are undergoing major rehabilitation, the operational risk associated with these projects as well as their interdependency with each other is much higher. This does not lend itself well to the traditional low bid design-bid-build delivery method as the contractor is not involved during the design process to help determine optimal solutions for complex matters. Bringing forward each project to Council for consideration of its delivery method will create inefficiencies when staff is looking to maximize opportunities to streamline the procurement and project delivery process.

Reason for not recommending: Use of traditional low bid design-bid-build may not be most appropriate delivery method for all RWF CIP projects. Requesting approval for every project contemplating to use the design-build delivery method adds time to each project schedule.

PUBLIC OUTREACH/INTEREST

This memo will be posted on the City's website for the March 2, 2015, Transportation and Environment Committee meeting.

Information about the proposed procurement strategy was shared during the Vendor Open House event held at the RWF on Thursday, September 25, 2014. More than 80 prospective consultants, contractors, and equipment suppliers attended the event. Information from the event has also been posted to [BidSync](#) and the [CIP Document Library](#) on the City's website.

Greater outreach will also be conducted for project-specific procurements if the City utilizes the

Clean Water State Revolving Fund Program to finance a particular project as the program requires recipients of the financing to seek the use of disadvantaged business enterprises (e.g., minority businesses, women business, small businesses) to satisfy their equipment, supplies, construction, and service procurement needs by completing certain good faith efforts.

COORDINATION

This memo has been coordinated with the Office of the City Attorney and the City Manager's Budget Office.

FISCAL/POLICY ALIGNMENT

The proposed project delivery and procurement strategy is consistent with the City's Charter and Municipal Code as well as State contracting regulations.

COST SUMMARY/IMPLICATIONS

The 2014-2015 Adopted CIP was developed with the assumption that all projects will be delivered using the design-bid-build method, with the exception of the Cogeneration Facility and Digested Sludge Dewatering Facility projects. Should a project change delivery methods, funds may need to be re-budgeted to future years to align with the encumbrance needs. Program funding needs may be affected if several projects change delivery methods.

CEQA

Not a Project, File No. PP10-069(a), City Organizational and Administrative Activities.

/s/Ashwini Kantak for
KERRIE ROMANOW
Director Environmental Services

/s/
BARRY NG
Interim Director of Public Works

For questions please contact Ashwini Kantak, Assistant Director of the Environmental Services Department at (408) 975-2553.

Attachments:

Attachment A: Consultant Procurements Planned for FY 14-15

Attachment B: Project Delivery Recommendation Memo Template

**Attachment A - Consultant Procurements Planned for Fiscal Year 2014-2015 for the
San José-Santa Clara Regional Wastewater Facility Capital Improvement Program**

#	Name of Request for Qualifications	Estimated Construction Cost	Estimated Consultant Cost *	Anticipated Advertisement Period Start
1	Technical Support Services for the Cogeneration Facility Project	\$69,130,000	\$1,500,000	Mar-15
2	General Engineering Services	Not Applicable	\$9,000,000	Mar-15
3	Engineering Services for the Headworks Projects	\$88,450,000	\$16,000,000	Mar-15
4	Engineering Services for the Facility-Wide Water Systems Improvements Project	\$9,800,000	\$2,000,000	Mar-15
5	Engineering Services for the Filter Rehabilitation Project	\$20,690,000	\$4,000,000	Apr-15
6	Engineering Services for the Nitrification Clarifiers Rehabilitation Project	\$34,500,000	\$7,000,000	Apr-15
7	Value Engineering and Peer Review Services	Not Applicable	\$9,000,000	May-15
8	Audit Services	Not Applicable	\$1,000,000	May-15

*Assumes the maximum compensation set for project-specific agreements will be approximately 18% of the project's estimated construction cost, regardless of the delivery method used. For projects delivered using the design-bid-build method, the consultant's services may entail providing design and engineering services during construction. For projects delivered using a design-build method, the consultant's services may entail acting as an owner's representative and providing construction management services including specialty inspections. The agreement for the Cogeneration Facility Project is an exception as the scope is limited to providing technical support.

CIP Program Memorandum



San José-Santa Clara
Regional Wastewater Facility

To: Primary recipient(s)
CC: Other recipient(s)
Date: Distribution date
From: Author
Subject: Delivery Method Recommendation for PROJECT NAME

Introduction

This document provides a recommendation regarding the delivery method for the [INSERT PROJECT NAME]. The evaluation was conducted by [INSERT PROGRAM ROLE, i.e. City of San José's (City) Project Manager]. The evaluation relies heavily on the conclusions drawn in the "Project Delivery Selection Technical Memorandum" which documents the adopted position of the Capital Improvement Program (CIP) for the San José/Santa Clara Regional Wastewater Facility (RWF) on selecting the appropriate delivery method given project characteristics.

The purpose of this Memorandum is to document the project characteristics that provide the basis for the recommendation of [PROJECT DELIVERY METHOD – Design-Bid-Build; Progressive Design-Build; Low-Bid Design-Build] for [INSERT PROJECT NAME]. The Memorandum will be presented at the "Approve Scope" Stage Gate Review Meeting [OR "Project Alternatives" Stage Gate Review Meeting], where the delivery method recommendation will be confirmed.

Project Background

[Provide a 1-paragraph description of project including scope, schedule, and any key concerns and considerations.]

Findings and Discussion

The RWF established seven criteria for evaluating projects for preferred delivery method in the "Project Delivery Selection Technical Memorandum". Each criterion was applied to the [INSERT PROJECT NAME] and is discussed below. The delivery methods considered were Design-Bid-Build (DBB), Progressive Design-Build (P/DB), and Low-Bid Design-Build (LB/DB).

1. Size

Key questions:

- Is the project design and construction cost less than \$10 million?

[State project size. Size is a threshold for considering design-build. State available delivery method(s) based on size.]

2. Environmental Review & Permitting

Key questions:

- Is the project CEQA/NEPA exempt?
- If not, have the CEQA/NEPA processes been completed?
- What are the anticipated permits required for the project?

[Describe current environmental review and permitting situation for project. The project manager should conduct an analysis to ascertain how the project's required environmental review and permit processes will affect the schedule under each applicable project delivery model. An anticipated exemption does not count for having CEQA/NEPA complete. If yes, project can consider low-bid design-build. State the available delivery method(s) based on environmental.]

3. Complexity

Key questions:

- Does the project affect sensitive process areas, other systems or other RWF construction?
- Are there unique or complex construction or condition assessment requirements?
- Are there significant operational impacts, coordination, or workarounds required during construction?
- Is the design and construction stand-alone?
- Is the design standard and/or repeatable?
- Is the scope easy to define and understand prior to 30% design completion?
- Can a condition assessment be performed without the contractor?

[Answer relevant questions for this project. Provide project details to justify. State whether complexity is "high" or "low". State preferred delivery method(s) based on complexity.]

4. Design Performance Risk:

Key questions:

- Is there a moderate to high probability of process or equipment failures within the design scope?
- Are new technologies being considered?
- Are there specific operational performance parameters that must be met?
- Is the technology proven and familiar at RWF?
- Is there high confidence in existing conditions that impact design?
- Does the project or design have no potential to impact RWF treatment processes or operations?

[Answer relevant questions for this project. Provide project details to justify. State whether design performance risk is "high" or "low". State preferred delivery method(s) based on design performance risk.]

5. Design Control:

Key questions:

- Does the owner want design control through 100% design?
- Can the owner's control end at 10%-30% or 70-90%?

[Explain why owner does or does not need control through 100% design. 10%-30% design control corresponds to LB/DB, 70-90% design control corresponds to some P/DB projects, and 100% design control is possible with P/DB or DBB. For a schedule critical project, design/construction may be accelerated by less owner design control. State preferred delivery method(s) based on design control.]

6. Optimizing Quality/Scope and Cost:

Key questions:

- Does the project have unique quality concerns that will not be adequately covered by the City's standard and project specifications?
- Does the owner want the ability to develop scope based on a set budget?

[Answer questions and provide relevant project details to justify. State preferred delivery method(s) based ability to optimize quality and cost.]

7. Schedule:

Key questions:

- Is the project schedule driven?
- Are there long-lead equipment items?

[Explain schedule considerations on project, including drivers and impacts of project schedule. Perform detailed schedule analysis to determine possible time savings from LB/DB or P/DB versus DBB. Provide project details to justify. State the outcome of detailed schedule evaluation and preferred delivery method(s) based on schedule. Address current program maturity with design-build delivery and whether the learning curve is expected to delay the project procurement.]

Summary of Decision Criteria

Criteria Key Questions	Response:	DBB	P/DB	LB/DB
1. Size < \$10M Yes = DBB No = DBB; P/DB; LB/DB	[Yes or No]			
2. CEQA complete or N/A? Yes = DBB; P/DB; LB/DB No = DBB; P/DB	[Yes or No]			
3. Complexity High = P/DB Low = DBB; P/DB	[High or Low]			
4. Design Performance Risk High = P/DB Low = DBB; P/DB; LB/DB	[High or Low]			
5. Design Control 10%-30% = LB/DB 70-90% = P/DB 100% = P/DB or DBB	[10% - 30%, 70-90%, 100%]			
6. Optimize Quality/Scope & Cost? Yes = P/DB No = P/DB; DBB; LB/DB	[Yes or No]			
7. Schedule-driven? Yes = P/DB; LB/DB No = DBB; P/DB; LB/DB	[Yes or No]			

Note: "X" denotes the available or preferred delivery method(s) for the specified criterion.

Recommendation

[State the preferred delivery method and the degree to which it is preferred (i.e. most criteria point to this method, or criteria are divided with one method slightly preferred, etc).]

Provide a 1-paragraph summary of which criteria were most influential in determining the delivery method for this project.

Discuss any potential benefits of using progressive design-build, and whether these benefits outweigh the additional resources and effort required to use progressive design-build.]